

Having Trouble Controlling Your Asthma? New Therapies for Severe Asthma



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Of the 25 million Americans affected by asthma, roughly 5 to 10 percent experience a persistent form of the condition, known as severe asthma.

Despite careful use of medications, many people with severe asthma often continue to experience coughing, wheezing, shortness of breath, and frequent asthma attacks.

“Severe asthma patients are typically resistant to traditional treatments, such as inhalers that contain corticosteroids and long-acting bronchodilators,” says [Dr. Elliot Israel](#), an allergist and pulmonologist and co-director of the [Severe Asthma Program](#) at Brigham and Women’s Hospital (BWH).

Severe Asthma Triggers

Severe asthma can be triggered or aggravated by some of the following factors:

- Improper use of medication
- Complicating medical conditions (e.g., [sinusitis](#))
- Cigarette smoking
- Allergies to pets, mold, dust mites, or other substances

Treating Severe Asthma with New Medications

The U.S. Food and Drug Administration recently approved medications that have been shown to help patients manage the symptoms of their difficult-to-control asthma.

These medications are known as biologics, or [monoclonal antibodies](#), which block key chemical reactions known to drive asthma symptoms.

The following biologics are being used to treat severe asthma symptoms.

- **Omalizumab** is a monoclonal antibody that removes a certain allergy protein (immunoglobulin E) from the blood. The medication reduces asthma flare-ups and lessens the severity of symptoms. It is taken by injection every two to four weeks and has few side effects.
- **Mepolizumab** and **reslizumab** are two monoclonal antibodies that block a specific protein which attracts certain white blood cells (eosinophils) to airways in severe asthma patients. Mepolizumab is given monthly by injection under the skin, and reslizumab requires an infusion once monthly.

Under the direction of Dr. Israel, investigators at the [Brigham and Women’s Asthma Research Center](#) are also currently conducting a study of another monoclonal antibody, dupilumab, for the treatment of severe asthma.

Bronchial Thermoplasty for Severe Asthma

A medical procedure known as [bronchial thermoplasty](#) is also used to treat certain patients with difficult-to-control asthma.

“Most asthmatics share two characteristics with regard to their bronchial tubes. First, the smooth muscles surrounding these tubes contract excessively in response to stimuli. Second, more muscle surrounds these bronchial tubes. More muscle that contracts excessively accounts for the dramatic symptoms of an asthma attack,” says [Dr. Christopher Fanta](#), a pulmonologist, co-director of the Severe Asthma Program and director of the [Partners Asthma Center](#).

Bronchial thermoplasty weakens the ability of muscles in the airways to contract during an asthma attack. The procedure involves the insertion of a bronchoscope (a tube with a camera) into the airway. Heat is then applied to the muscles that surround the airways, which reduces the strength of the muscle and its ability to cause an asthma attack.


“Three bronchial thermoplasty treatments over six weeks can last for several years,” says Dr. Fanta.

Severe Asthma Program at Brigham and Women’s Hospital

Medical providers within the [Severe Asthma Program](#) at BWH can advise patients about these new therapies. To learn more about these new biologics or bronchial thermoplasty, or to speak with a specialist, you can request an appointment [here](#). Patients can also enroll in ongoing clinical trials that may involve new treatments for severe asthma.

- By Dustin G.





In this video, Christopher Fanta, MD, co-director of the Severe Asthma Program, describes novel therapies for patients with severe asthma.

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